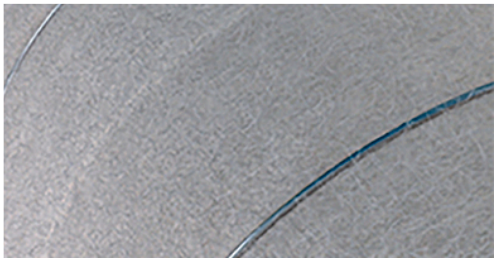
INSULATION JUST GOT BETTER

ArmaGel HT

Flexible aerogel blanket for high-temperature applications

// ASTM C1728 compliant
// Hot conditions up to 650 °C (1200 °F)
// More choice: 5, 10, 15 and 20mm thicknesses
// Up to five times better thermal performance than competing insulation materials
// Mitigates the risk of corrosion under insulation (CUI)

www.armacell.com/armagel



armacell®
ArmaGel

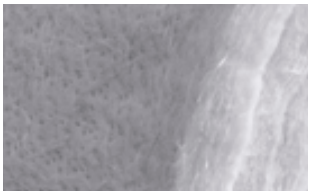
INSULATION JUST GOT BETTER

ArmaGel HT

Welcome to the next generation of aerogel blanket technology. Flexible and bendable. Environmentally safe. Designed for incombustibility. Superior thermal performance. Hot conditions up to 650 °C (1200 °F) is no sweat. ArmaGel HT is the reliable solution for high-temperature applications.

High-temperature

Flexible



Hydrophobic

Learn more.

AEROGEL

Used by NASA to bring home a piece of a comet because it's strong enough to stop a bullet in its track, aerogel offers an uncanny array of physical properties - thermal, acoustical – and so holds incredible potential for insulation uses. As the name suggests, aerogel is a solid derived from gel in which the liquid component of the gel has been replaced with air making it dry and porous. In fact, over 90 percent of the volume is empty space making aerogel the world's lightest solid material. It's also 1,000 times less dense than glass, making it the world's lowest density solid material.

UP TO
80%
THINNER
than competing insulation products

UP TO
5 ×
SUPERIOR THERMAL PERFORMANCE
than competing insulation products

4
THICKNESSES FOR THE BEST FIT

YOUR BENEFITS

// Increase coverage
New sizes and more choice. 10mm thickness available today. 5, 15 and 20mm coming soon. A thicker layer gives more insulation coverage per man hour than traditional aerogel insulation.

// Reduce labour cost
Cuts easily and conforms to preferred shapes, with less wastage, making it the right fit for installers.

// Reduce downtime
Product removal is made simple, reducing both downtime and the need to purchase replacement insulation during regular maintenance cycles.

// Superior thermal performance
Offering up to 5 times superior thermal performance versus like-for-like competing insulation products.

// Hydrophobic and breathable
Repels liquid water, but allows vapour to escape, helping to keep equipment drier for longer.

// Ultra-thin and ultra-light
Equal thermal performance at a fraction of the thickness. Improved handling and easier transportation.

// Versatile
More flexibility than traditional aerogel insulation materials.

// Environmentally safe
Chloride-free and landfill disposable.

// CUI defence
Hydrophobicity and breathability enhance protection against corrosion under insulation (CUI).

TECHNICAL DATA - ARMAGEL HT

Brief description	ArmaGel HT is a flexible aerogel blanket suitable for elevated temperature applications with maximum operating temperatures up to 650°C (1200°F). ArmaGel HT is compliant to ASTM C1728, Type III, Grade 1A.
Material type	Aerogel blanket.
Product colour range	Grey
Special features	ArmaGel HT is resistant to elevated operating temperatures up to 650 °C (1200 °F). The product is suitable for use in multi-layer applications including ArmaSound Industrial Systems.
Product range	Sheets in rolls, 5, 10, 15 and 20 mm (0.2, 0.4, 0.6, 0.8 in) thickness and width of 1.5 m (59 in). For further details, please refer to the product range tables at the end of this document.
Applications	Thermal insulation/protection of pipes, vessels and ducts (including elbows, fittings, flanges etc.) in offshore, onshore, industrial (typically oil and gas) and process equipment facilities. ArmaGel HT is also used as a component of ArmaSound Industrial Systems to provide acoustic insulation on industrial pipework and vessels, ensuring reduction of sound transmission.
Installation	For industrial applications it is recommended to consult the relevant Armacell application manual(s). For further information please contact our Technical Services.

Property	Value / Assessment									Standard / Test method
Temperature range										
Service temperature[1,2,3,4]	Max. °C				Max. °F					ASTM C411, ASTM C447
	650				1,200					
Thermal conductivity										
Declared thermal conductivity[5]	θm	24°C (75°F)	38°C (100°F)	93°C (200°F)	149 °C (300°F)	204°C (400°F)	260°C (500°F)	316°C (600°F)	371°C (700°F)	ASTM C177
	λd ⩽ [W/(m·K)]	0.021	0.022	0.023	0.025	0.029	0.032	0.036	0.043	
	k ⩽ [Btu-in/(h-ft²-°F)]	0.14	0.15	0.16	0.18	0.20	0.22	0.25	0.30	
Temperature resistance										
Hot surface performance[2]	Pass									ASTM C411
Linear shrinkage under soaking heat	<2% in width and length									ASTM C356
Fire Performance and Approvals										
Reaction to fire	B-s1,d0									EN 13501-1[2]
Surface burning characteristics	⩽ 5 flame spread index ⩽ 10 smoke development									ASTM E84
Resistance to water vapour										
Water vapour sorption	⩽ 5% by weight									ASTM C1104
Resistance to water										
Hydrophobic	Yes									
Water absorption	Pass									ASTM C1763
Corrosion mitigation										
Corrosiveness to steel	Passed, Mass Loss Corrosion Rate (MLCR) not exceeding that of 5 ppm chloride solution on carbon steel coupon									ASTM C1617, Procedure A
Stress corrosion cracking	Pass									ASTM C692, ASTM C795
Physical attributes										
Nominal density	180 kg/m³ (11 lb/ft³)									ASTM C303

Property	Value / Assessment	Standard / Test method
Mechanical properties		
Compressive strength[6]	≥ 3 psi/ 20.7 kPa at 10% compression	ASTM C165
Flexibility of insulation blankets	Flexible	ASTM C1101
Weather and UV resistance		
Weather resistance	In all industrial applications the outer layer of the material must be protected with an adequate covering like metal jacketing or preformed UV-cured GRP (Glass-Reinforced Plastic) cladding. Please contact Technical Services for guidance on the temperature limitations and specific construction considerations which need to be made for each jacketing system.	
Health and environment		
Fungal growth	No growth	ASTM C1338
Other technical features		
Shelf life[7]	Max. 3 years	
Storage	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight.	

[1] For use in temperatures beyond the published value, please contact Technical Services.

[2] For operating temperatures above 400 °C (752 °F) a metallic foil barrier with 0.05 mm (0.002 inch) thickness must be additionally installed. For details please contact Technical Services.

[3] For live line installations, refer to the ArmaGel HT and HTL application manual.

[4] ArmaGel HT is designed for application where the operating temperatures are above ambient. In the event that the operating temperatures are below ambient please consult our technical services for further information and support.

[5] Measured under a load of 1.5 kPa (0.22 psi).

[6] Test performed with a preload of 13.8 kPa (2 psi).

[7] Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Roll - jumbo

Item	Thickness [mm]	Thickness [Inch]	Width [inch]	Length [m]	Length [ft]	EAN	Content [metric]	Content [imperial]
AGH-05-00/150P	5	0.2	59	65	213.3	7612207462692	97.5 m²	1049.5 ft²
AGH-10-00/150P	10	0.4	59	40	131.2	7612207462708	60 m²	645.8 ft²
AGH-15-00/150P	15	0.6	59	26	85.3	7612207463385	39 m²	419.8 ft²
AGH-20-00/150P	20	0.8	59	20	65.6	7612207462685	30 m²	322.9 ft²

Other information	
Thickness tolerance	5 mm (0.2 in) nominal thickness: ± 1 mm 10 mm (0.4 in) nominal thickness: ± 2.5 mm 15 mm (0.6 in) nominal thickness: ± 3 mm 20 mm (0.8 in) nominal thickness: ± 4 mm
Length tolerance	± 5%
Width tolerance	± 3%

Roll - standard

Item	Thickness [mm]	Thickness [Inch]	Width (m)	Width [inch]	Length [m]	Length [ft]	EAN	Content [metric]
AGH-05-00/150S	5	0.2	1.5	59	16	52.5	7612207454093	24 m²
AGH-10-00/150S	10	0.4	1.5	59	8	26.2	7612207452488	12 m²
AGH-15-00/150S	15	0.6	1.5	59	6	19.7	7612207460230	9 m²
AGH-20-00/150S	20	0.8	1.5	59	4	13.1	7612207454116	6 m²

Other information	
Thickness tolerance	5 mm (0.2 in) nominal thickness: ± 1 mm 10 mm (0.4 in) nominal thickness: ± 2.5 mm 15 mm (0.6 in) nominal thickness: ± 3 mm 20 mm (0.8 in) nominal thickness: ± 4 mm
Length tolerance	± 5%
Width tolerance	± 3%

ArmaGel | ArmaGel HT | Brochure | 072023 | en-AU

ABOUT ARMACELL

As the inventor of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal and mechanical solutions that create sustainable value for its customers. Armacell's products significantly contribute to global energy efficiency making a difference around the world every day. With more than 3,300 employees and 27 production plants in 19 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for acoustic and lightweight applications, recycled PET products, next-generation aerogel technology and passive fire protection systems.

armacell®
ArmaGel

For more information, please visit:
www.armacell.com